

```
# Searching Methods
```

```
arr = [10, 20, 30, 40, 50]
```

```
key = int(input("Enter element to search: "))
```

```
# ----- Linear Search -----
```

```
for i in range(len(arr)):
```

```
    if arr[i] == key:
```

```
        print("Linear Search: Found at position", i)
```

```
        break
```

```
else:
```

```
    print("Linear Search: Not found")
```

```
# ----- Binary Search -----
```

```
low = 0
```

```
high = len(arr) - 1
```

```
while low <= high:
```

```
    mid = (low + high) // 2
```

```
    if arr[mid] == key:
```

```
        print("Binary Search: Found at position", mid)
```

```
        break
```

```
    elif key < arr[mid]:
```

```
        high = mid - 1
```

```
    else:
```

```
        low = mid + 1
```

```
else:
```

```
    print("Binary Search: Not found")
```

Sample Output:

Linear Search: Found at position 2

Binary Search: Found at position 2